Improper procedures used by VCSU employees can cause injury, disability, or death. By understanding and following safe operating procedures for use of heavy equipment, we can prevent injury for yourself and your coworkers.

**General Procedures**
Safe operating procedures for the following equipment (equipment powered by electric motors or internal combustion engines):

- Forklifts and power platforms
- Manlifts/Aerial Lift
- Tractors
- Loaders
- Road Graders
- Backhoe
- Trucks (dump and garbage)
- Snow removal equipment

Only trained and authorized operators shall be permitted to operate the designated equipment. Personal protective equipment is **mandatory** and may include the following:

- Boots or safety shoes
- Eye/face protection
- Long pants
- Hard hat
- Hearing protection
- Gloves

**Pre-start/Walk around Inspection**

- Check for loose or worn parts and repair or replace immediately.
- Check all fluid/coolant levels.
- **Caution: Open the radiator cap only when the engine is cooled.**
- Inspect hydraulic line connectors and hose for leaks before applying pressure to the system. Use paper or cardboard, not your hands, to search for leaks.
- **Caution: Hydraulic fluid escaping under pressure can penetrate skin and cause serious bodily harm.**
- Check tires for cuts, bulges, irregularities, abnormal wear and proper inflation.
- A fire extinguisher and first aid kit may be mounted in the cab of some equipment.

**Machine Maintenance**

- Ensure the cab area is clean and free of debris and tools.
- Clean windshield, mirrors and lights.
- Removal all oil, grease or mud and snow from grab irons, hand rails, steps, pedals and floor to prevent slips and falls.
- Remove or secure any loose items such as tools, chains or lunch boxes from the cab.

**Work Site**

- Check and mark the area for underground cables, gas lines and water mains.
• Know work area clearances- watch for overhead or underground objects, holes, drop offs, and partially hidden obstacles and wires.

Mount Properly

• **DO NOT GET ON OR OFF A MACHINE THAT IS IN MOTION!**
  • Maintain a 3-point contact with the steps and hand rails while getting on/into the machine- **do not** use the controls or steering wheel as a handhold.
  • Do not operate the machine with wet, greasy or muddy hands or shoes.

Refueling

• Shut off and cool the engine and any electrical equipment before fueling.
• Ensure the fueling area is well ventilated.
• Do not smoke while refueling. Keep open flames and sparks away from area.
• Do not use gasoline or diesel fuel for cleaning parts.
• Know where the fire extinguishers are located.

Shut Down/Parking

• Park on level ground.
• When parking on a grade, position at right angles to the slope, block the wheels and set the parking brakes.
• When parking, lower all loader, buckets and hydraulics to the ground.

Forklifts and Power Platforms

Including trucks, tractors, platform lift trucks, motorized hand trucks and other specialized industrial trucks powered by electric motors or internal combustion.

General Safety- Safe Operation:

• Only trained and authorized operators shall be permitted to operate a powered industrial truck.
• No person shall be allowed to stand or pass under an elevated part of a fork lift or truck whether loaded or empty.
• Do not drive a fork lift up to anyone standing at a fixed place.
• Unauthorized personnel shall not be permitted to ride on a powered industrial truck
• Use the proper hand signals and safety devices when working around other people.
• Yield right-of-way to pedestrians.
• Stunt driving and horseplay shall not be permitted.
• Speeds shall be maintained to keep the vehicle under control and the load managed.

Man Lifts/Aerial Lift

Man-Lifts/Aerial Lifts are intended for the conveyance of one person only.

General Safety - Safe Operation:

• Only trained and authorized operators shall be permitted to operate a powered industrial truck.
• Never exit or enter the platform by any other means than the access system provided and place the boom in the lowest position to the ground before shutting down or getting off the machine.
• Do not position the work platform near holes or drop-offs and never drive it into holes, curbs or other obstacles on the ground.
• If you should encounter a tipping situation, immediately retract the boom. **DO NOT** lower the boom in a tipping situation.
• Do not elevate the platform if wind speed exceeds 20 MPH (32 km/h).
• **DO NOT EXCEED THE PLATFORM’S RATED CAPACITY** (printed on the capacity plate on the machine). Be sure that any load on the platform is secure and evenly distributed.
• Be aware of all overhead clearances, especially when working around power lines.
• Employees shall stand firmly on the floor of the basket, and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position.
• Maintain a FIRM FOOTING on the floor of the platform at all times. (NEVER CLIMB ONTO THE PLATFORM RAILING OR ONTO ANY OBJECTS ON THE PLATFORM FLOOR TO ATTAIN ADDITIONAL WORKING HEIGHT.)
• A full body harness shall be worn and a lanyard attached to the boom or basket when working from an aerial lift. **Please refer to ‘VCSU SAFE OPERATING PROCEDURES: Fall Protection’.
• Always be aware of what is below, above, beside, before and behind the work platform during any elevating, lowering, extending, retracting, swinging, rotating, leveling, or driving function.
• Always look in the direction of travel.
• If you are unable to clearly see in the direction of motion, post a lookout or signal person before moving the work platform.
• Never position the platform into an overhead obstruction or put yourself in a position of interference between the platform and an overhead object.
• Avoid contacting the work platform and its occupants with external objects during operation. Exercise caution when lowering the platform to avoid descending onto objects or personnel below.
• Clear all personnel from the counterweighted superstructure area

Tractor
This is a one-person machine. There should be no other person allowed in or on the machine at the same time of operation.

General Safety- Safe Operation:

• An approved roll bar and seat belt must be installed for safe operation.
  o Do not use the seat belt if the roll bar is removed from the tractor.
• Drive at speeds compatible with the weather conditions and ground/road conditions. Watch for row ends, ditches and trees.
• Keep tractor in gear at all times in order to have full control of the tractors speed in various situations/terrains.
• Follow the manufacturer’s recommendations regarding towing and pulling equipment.

Snow Removal Equipment
Weather conditions dictate the callback and response of snow removal personnel. During normal school schedule, Facilities Services surveys the weather situations and campus conditions. Facilities Services removes snow and ice in a timely fashion when possible. During the weekend or holidays, Facilities’ Director determines the response of personnel (depending on the amount of snow and planned activities).

Snow Blowers
General Safety – Safe Operation

• Only trained and authorized operators shall be permitted to operate the designated equipment.
• Equipment must be in good condition. Inspections are to be done prior to each use for needed repairs or replacement items.
• Equipment such as tire chains, warning lights, and markings may be required.
• Keep your windshield and other window areas clean and clear for the best possible visibility. Use the windshield wipers and the window defrosters.
• Be alert for any children playing, pedestrians or obstructions covered by snow- such as manhole covers, curbs, bridge abutments, embankments and fire hydrants.
• Ensure all people are clear of the snow blowers/throwers.
• The snow should always be blown with the wind.
• Blow snow within the manufacturer’s recommended ground speeds.
• Ensure the snow removal attachment is fully raised and secured when not in use.
• Engage parking brake and disengage components before leaving machine.
• Observe and understand all the safety decals placed on machine.
• Never work on a snow removal machine with components running. Stop machine prior to unclogging, repair or refueling.

**Sweepers**
Hydraulic powered rotary attachment which sweeps debris 30 degrees to the right or left.

**General Safety - Safe Operation**

• Personnel must be clear of the brush and of all moving parts while operating the sweeper.
• Eye protection must be worn at all times by the operator and anyone within the discharge area of the brush.
• Sweep away from people, buildings, or cars- toward an open area.
• Turn engine and brush off to allow all moving parts to stop before adjusting or servicing the sweeper.
• This is a one operator vehicle- no riders are allowed on the sweeper or vehicle it is mounted on.
• Operate sweeper or tractor only with PTO guards and all protective shields in place.
• Do not dismount, mount or work on sweeper or loader with the sweeper arms in the raised position.

**Snow Plows and Tractors**
Vehicles such as tractors, pick-ups and end loaders are frequently used with plow attachments for clearing snow from larger areas. Such vehicles must be equipped with a flashing light for visibility and those operating in pedestrian areas should be outfitted with reverse alarming. Operators of such plow equipment must be constantly aware of potential hazards existing under the blanket of snow.

Pedestrians should never assume that working personnel and the operators of heavy equipment are able to see you. Pay attention and try to establish eye contact whenever possible.

VCSU will clear sidewalks first then concentrate on parking lots. Parking lot snow removal will begin when snowfall stops. As of fall 2011, the City of Valley City will be enforcing a “No Overnight Street Parking” all across campus- in efforts to make snow removal on campus more efficient and effective. After a snowfall, Public Works will be on campus around midnight (as the campus is now one of their top priorities for snow removal).

**Bobcat / Loaders**
Refer to the product documentation that accompanied your equipment for more information and specific instructions. Bobcat has provided a training video available at the Facilities Services office, or online at: [http://www.bobcat.com/trainings/safety/safety_videos](http://www.bobcat.com/trainings/safety/safety_videos)